

**METHOD AND APPARATUS FOR EXCHANGING ROUTING
INFORMATION BETWEEN VIRTUAL PRIVATE NETWORK SITES**

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ABSTRACT

A VR-VRF gateway enables VPN sites utilizing different VPN models, such as a virtual router based VPN and an IETF 2547 based VPN, to exchange routing information and communicate with each other over a VPN tunnel. Each VPN site on a VPN provides routing information to the VR-VRF gateway which stores the routing information in a routing table for that VPN. The routing information is distributed by the VR-VRF gateway to the other VPN sites. When the VR-VRF gateway receives a packet of data to be passed over the VPN tunnel, it accesses the routing table for the particular VPN to ascertain how the packet is to be routed, or the next hop attribute for the packet. Where the VR-VRF gateway is not configured to handle data traffic on the VPN tunnel, it populates routing entries on another network device on the VPN tunnel to enable the other network device to handle the actual traffic over the VPN tunnel.